

What is claimed is:

1. A connector system comprising:
 - a first tubular connector body comprising a housing having a first body portion and first contact portions;
 - a second tubular connector body comprising a housing having a second body portion configured to telescopingly engage with the first body portion and second contact portions configured to axially mate with the first contact portions;
 - an annular collar rotatively held on the first body, wherein the annular collar encircles the first and second body portions when the first and second body portions are engaged;
 - a spring disposed inside the collar, the ends of the spring being confined between the first body and the collar so as yieldingly to resist rotation of the collar relatively to the first body;
 - at least one collar tab on the collar; and
- 15 at least one receptacle tab on the second body axially opposed to the at least one collar tab for coupling the collar and first body to the second body, wherein the collar tab and the receptacle tab have opposed flared cam surfaces cooperatively producing rotation of the collar relative to the second body as the first and second bodies are telescoped to a mated contact position, the cam surfaces guiding the collar tab around the body tab, wherein the receptacle tab includes an inclined back surface that extends at a negative angle relative to an axis of rotation of the collar,
 - wherein the coiled spring yields as the collar is rotated by the collar tab and receptacle tab during contact mating, and the spring then rotating the collar tab to a latching position axially behind the receptacle tab thereby releasably locking the connector bodies in mated contacting position.
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2. The connector system of claim 1, wherein the collar tab and the receptacle tab are triangular in shape with an opposing point from which the camming surfaces flare in opposite directions and a back surface remote from the points and intersecting the camming surfaces.
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3. The connector system of claim 1, wherein the negative angle is between about 5 and about 45 degrees relative to a radial axis.

4. The connector system of claim 1, wherein the collar and first body have rotationally opposed stops mutually engaging to limit rotation of the collar by the spring relative to the first body.
5. The connector system of claim 4, wherein the stops are disposed normally to position the collar relative to the first body with the collar tab located with respect to the electrical contacts on the first body in a matching alignment for mating with the contacts and receptacle tab of the second body.
- 10 6. The connector system of claim 5, wherein the spring urges the collar stops to a normal position striking the stops on the first body.
7. The connector system of claim 6, wherein the stops have opposed faces producing an audible snap when urged by the spring to an engaged position.
- 15 8. The connector system of claim 5, wherein one of said first body and second body has a key and one of said first body and second body has a key way, said key and key way slidingly interfitting when the first and second bodies and the collar are in matching alignment.
- 20 9. The connector system of claim 1, wherein the second body has a circumferential ramp at the same radius as the collar tab, the ramp slanting across the path of the collar tab to cam the collar tab, collar and first body apart and out of engagement with the second body when the collar is manually rotated relative to the mated bodies.
- 25 10. The connector system of claim 1, wherein the spring returns the collar to matching alignment when the bodies are disengaged.
- 30 11. The connector system of claim 1, wherein the collar and second body have longitudinally matching index marks indicating matching alignment of the first and second body and collar.

12. The connector system of claim 1, wherein the first contact portions on the first body are male contacts and the second contact portions on the second body are female contacts for receiving the male contacts.

5 13. The connector system of claim 1, wherein the spring comprises a round wire of spring metal coiled around the first body.

14. The connector system of claim 1, wherein the second body includes at least one engagement recess formed in an outer surface for receiving the collar tab, said engagement 10 recess comprising a circumferential ramp, a longitudinal wall and the receptacle tab protruding from the longitudinal wall, wherein the receptacle tab is formed by the opposed cam surface and an inclined back wall extending from the longitudinal wall in an axially backward direction.

15 15. A connector system comprising:
a first tubular connector body comprising a housing having a first body portion and first contact portions;
a second tubular connector body comprising a housing having a second body portion configured to telescopingly engage with the first body portion and second contact portions 20 configured to axially mate with the first contact portions;
an annular collar rotatively held on the first body, wherein the annular collar encircles the first and second body portions when the first and second body portions are engaged;
a spring disposed inside the collar, the ends of the spring being confined between the first body and the collar so as yieldingly to resist rotation of the collar relatively to the first 25 body;
at least one collar tab on the collar having a camming surface; and
at least one engagement recess formed on the second body for receiving the collar tab, comprising a circumferential ramped wall, a longitudinal wall and a protrusion extending from the longitudinal wall comprising an angled back wall extending radially forward and 30 axially backward from the longitudinal wall at an angle and a camming wall intersecting the back wall and opposed to the camming surface of the collar tab, wherein the collar tab and the protrusion camming surfaces cooperatively produce rotation of the collar relative to the second body as the first and second bodies are telescoped to a mated contact position, the cam surfaces guiding the collar tab around the protrusion, wherein

the coiled spring yields as the collar is rotated by the collar tab and protrusion during contact mating, and the spring then rotating the collar tab to a latching position axially behind the protrusion and into contact with the longitudinal wall thereby locking the connector bodies in mated contacting position, wherein the angle of the angled back wall of the

5 protrusion inhibits the receptacle tab from releasing the collar tab.

16. The connector system of claim 15, wherein the angle of the angled back wall relative to a radial axis of the connector system is between about 5 and about 45 degrees.

10 17. A connector body for a connector system, comprising:

a first tubular connector body comprising a housing having a first body portion and first contact portions;

15 a first cam tab for receiving a second cam tab of a second tubular connector body, wherein the cam tab includes a camming surface and an angled back surface, wherein the angled back surface extends at a negative angle relative to a radial axis of the connector body.

18. The connector body of claim 17, wherein the negative angle is between about 5 and about 45 degrees.

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